

## DUCHEсне COUNTY ROAD DEPT.



P.O. Box 356 Duchesne, Utah 84021-0356  
801-738-2468 Fax 738-5924 Ans. Mach. 738-2469

April 18, 2000

Dear Tony,

Enclosed you will find a rough draft and maps for our second attempt at a large mining permit. When we have this as you want it, we can retype on new form MR-LMO.

Thank you.

A handwritten signature in cursive script, reading "Douglas Nielsen".

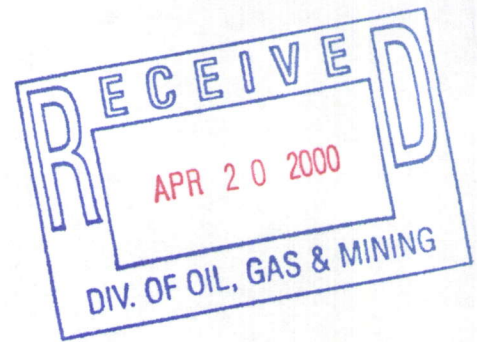
Douglas Nielsen  
Supervisor  
Duchesne County Road Dept

DN/tc

RECEIVED

APR 20 2000

DIVISION OF  
OIL, GAS AND MINING



**R647-4-105 Maps:**

105.1 see exhibit B

105.2 see exhibit B

105.3 see exhibit B

**R-647-4-106 Operation Plan**

106.2 See Exhibit E

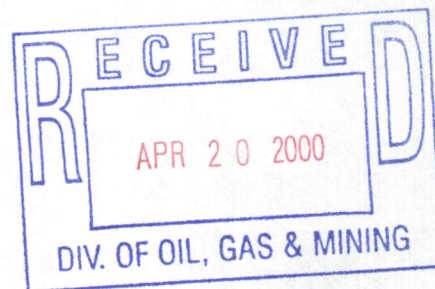
106.4        There will be no overburden generated as we will not do any mining out side of existing pit which is already striped of overburden. We will use about 40,000 C Y per year of tarsands with about 10% of this being oversize waste rock ranging from gravel size to large boulders up to 3 ft in diameter.

**R647-4-106 Operation Plan:**

106.6 Topsoil will be seeded with cover crop and signs indicating they are not to be disturbed.

The 4.6 acres proposed mining extension area will not be used <sup>due</sup> to excessive overburden depth. All access road and core drilling pads and core holes will be reclaimed and reseeded by Fall 2000.

106.9: There will be approximately 50,000 tons of crushed ore on site in April of each year.





**R647-4-107 Operation Practices**

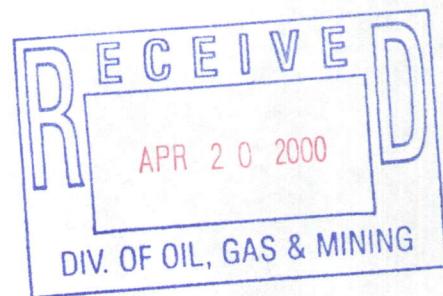
107.1 Public Safety and Welfare

107.1.15 All access roads to access above high wall will be reclaimed by Oct-2000. All operations are behind locked gate and fences.

107.6 As there will be no new disturbed area, reclamation will not begin until we have mined as far down in existing pit as we can safely go, ten years more or less.

**R-647-4-109 Impact Assessment**

109.4 The bench spacing will continue the same as now. As we go down, no new mine expansion planned, due to excessive overburden depth.

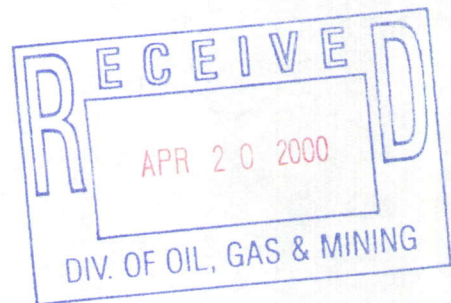


**R-647-4-110 Reclamation Plan**

- 110.2 As no new mining (outside existing pit) will be done it may be years away for final reclamation of existing pit. At that time we will push all available overburden into pit and as far up for the highwall as possible.
- 110.3 This road will remain as it is access to private land East of tar sand pit.
- 110.5 So attached. All disturbed areas will be covered with 6 inches of topsoil. It is not known at this time if overburden material will be needed as top soil substitute. If over burden is used there may be a need of fertilizers.

**R647-4-111 Reclamation Practices**

- 111.1 Public Safety and Welfare as the remaining high wall is remote and accessible only on foot. No berms or fences are planned.

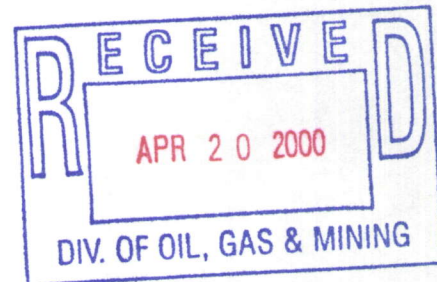


**R-647-4111 Reclamation Practices**

111.6 See 110.2

111.7 See 110.2

111.12 The entire disturbed area will not be 20.9 acres excluding the proposed mining extension of 4.6 acres. The disturbed area will be 10.4 acres.





R 647-4-110  
110.5

Recommended Revegetation Species List  
for

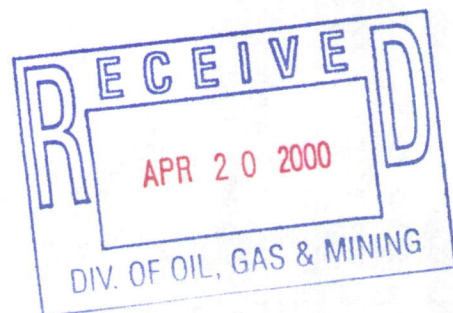
Duchesne County  
Duchesne County Tar Sands  
M/047/028

Prepared by DOGM November 29, 1995

<u>Common Name</u>	<u>Species Name</u>	<u>*Rate lbs/ac (PLS)</u>
'Hycrest' crested wheatgrass	<u>Agropyron cristatum 'Hycrest'</u>	0.5
Intermediate wheatgrass	<u>Agropyron intermedium</u>	1.0
Orchard Grass	<u>Dactylis glomerata</u>	0.5
Basin Wildrye	<u>Elymus cinereus</u>	1.5
Indian ricegrass	<u>Oryzopsis hymenoides</u>	1.5
Ladac Alfalfa	<u>Medicago sativa</u>	1.0
Yellow sweetclover	<u>Melilotus officinalis</u>	0.5
Palmer penstemon	<u>Penstemon palmeri</u>	0.5
Small burnet	<u>Sanguisorba minor</u>	1.5
Wyoming big sagebrush	<u>Artemisia tridentata wyomingensis</u>	0.1
4-Wing Saltbush	<u>Atriplex canescens</u>	1.0
Rubber rabbitbrush	<u>Chrysothamnus nauseosus</u>	0.25
Forage kochia	<u>Kochia prostrata</u>	0.5
Bitterbrush	<u>Purshia tridentata</u>	1.0
Total		11.35 lbs/ac

\*This is the recommended drill seeding rate.

If the species are to be broadcast seeded, increase the rate by 50%.





# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

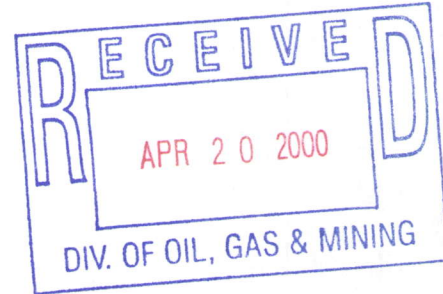
Michael O. Leavitt  
Governor

Ted Stewart  
Executive Director

Lowell P. Braxton  
Division Director

1594 West North Temple, Suite 1210  
PO Box 145801  
Salt Lake City, Utah 84114-5801  
801-538-5340  
801-359-3940 (Fax)  
801-538-7223 (TDD)

April 27, 1998



Douglas Nielsen  
Road Supervisor  
Duchesne County  
P.O. Box 356  
Duchesne, Utah 84021-0356

Re: Initial Review of Notice of Intention to Commence Large Mining Operations, Duchesne County, Duchesne County Asphalt Mine, M/047/028, Uintah County, Utah

Dear Mr. Nielsen:

The Division has completed a review of your Notice of Intention to Commence Large Mining Operations for the Duchesne County Asphalt Mine located in Section 19, T2N, R1E, Uintah Special Meridian, Uintah County, Utah. The submission was received by the Division on October 8, 1997. The submission included a NOI-LMO form, a set of soil data, and a set of vegetation data. Due to a backlog of other permit submissions we have not been able to review this submission sooner. After reviewing the submission information, the Division has the following comments which will need to be addressed before tentative approval may be granted. The comments are listed below under the applicable Minerals Rule heading. Please format your response in a similar fashion.

The Division will suspend further review of the Duchesne County Asphalt Mine NOI until your response to this letter is received. The \$32,750 interim surety bond received by the Division on February 2, 1998 will need to remain in place until the Division grants final approval of the large mine plan application. If you have any questions in this regard please contact me, Tony Gallegos, Lynn Kunzler, or Tom Munson of the Minerals Staff. If you wish to arrange a meeting to discuss this review, please contact us at your earliest convenience. Thank you for your cooperation in completing this permitting action.

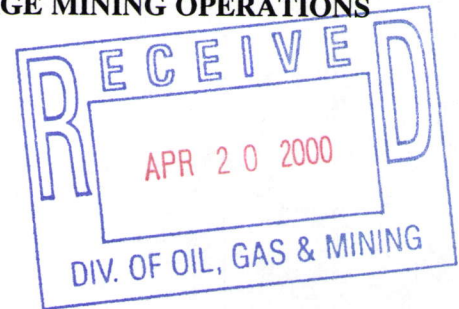
Sincerely,

D. Wayne Hedberg  
Permit Supervisor  
Minerals Regulatory Program



## REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

Duchesne County  
Duchesne County Asphalt Mine  
M/047/028  
April 27, 1998



### R647-4-105 - Maps, Drawings & Photographs

#### **105.1 Topographic base map, boundaries, pre-act disturbance**

Please provide a version of the surface facilities map (Exhibit B map) which identifies pre-law disturbances within or adjacent to the area delineated by the bold border. Please identify any pre-law disturbances within the Exhibit B bold border where no topsoil was salvaged. Please provide the acreage for these pre-law areas. Please identify any areas where topsoil was not salvaged which are not pre-law disturbances. (AAG)

✓ see Exhibit B

#### **105.2 Surface facilities map**

Exhibit B provides acreages for specific types of disturbances within the bold permit boundary. Are the unlabeled areas within the bold permit boundary considered undisturbed? What is the acreage associated with the "Previous Crushing and Stockpiling Area" shown on Exhibit B? (AAG)

✓ see Exhibit B

#### **105.3 Drawings or Cross Sections (slopes, roads, pads, etc.)**

Please provide several cross sections running east and west through the permit area which describe the configuration during active operations and also after final reclamation. One cross section should intersect the proposed mining area, present mining area, and waste material stockpile. One cross section should intersect the proposed mining area, existing roadway, material stockpile and loading area, and existing Uintah County road right-of-way. One cross section should intersect the existing roadway, proposed overburden stockpile and existing county road right-of-way.

see Exhibit D & E

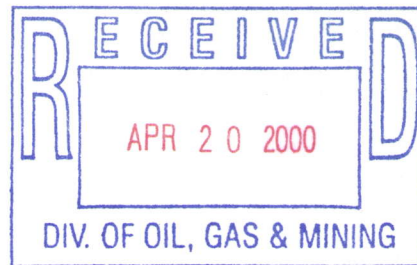
If not included in the cross sections requested above, please provide cross sections through the pit highwall running east and west which show the typical highwall configuration during operations and after final reclamation.

Please show any road to be constructed to access the upper area within the proposed mining extension on the surface facilities map.

see Exhibit E

Please provide a reclamation treatments map similar to Exhibit B which identifies areas to receive various reclamation treatments. Use cross hatching or color coding to identify the different combinations of reclamation treatments to be applied to various areas. The reclamation treatments map should also show areas which are not proposed to be reclaimed. Please note that areas which are not proposed to be reclaimed will need to be included in a variance request as described by section R647-4-112 of the Minerals Rules. (AAG)

see Exhibit E



**R647-4-106 - Operation Plan**

**106.2 Type of operations conducted, mining method, processing etc.**

Please describe any proposed access road from the lower area up to the proposed mining extension. This description should include the width, length, and grade of the road. Please describe any structures, equipment, or facilities located on site which are associated with the normal mine operations. Please describe the size and composition of both temporary structures (portable or skid mounted) and permanent structures (on foundations). (AAG)

*See  
Exhibit  
E*

**106.4 Nature of materials mined, waste and estimated tonnages**

Page five of the submission describes the estimated ore and waste rock/overburden as 30,000 CY per year. On this same page the overburden is described as 30,000 CY/yr, reject materials as 3,000 CY/yr, and the ore as 40,000 CY/yr. Please explain these conflicting figures. Please describe the mineral and chemical composition of the asphalt overburden materials. This section of the submission stated "waste rock can go from gravel size to large boulders approximately 3 inch in diameter." Was the intended size for the boulders three feet in diameter rather than three inches? (AAG)

**106.6 Plan for protecting & redepositing soils**

The plan indicates that topsoil will be salvaged and stockpiled for reclamation. Please describe how these topsoil piles will be protected from further impacts. At a minimum, they should be seeded with a cover crop and signs placed indicating they are not to be disturbed. (LK)

The submission does not describe salvage of topsoil materials in the 4.6 acre proposed mining extension area. During telephone conversations with County representatives, the Division has requested that the topsoil materials in this area be salvaged and stockpiled separately from overburden material for use in reclamation. Please provide an estimate of the topsoil volume to be salvaged from this area and describe the location for stockpiling these soils. (AAG)

**106.9 Location & size of ore, waste, tailings, ponds**

Please estimate the typical volume or tonnage of ore to be stockpiled on site during operations. (AAG)

**R647-4-107 - Operation Practices**

**107.1 Public safety & welfare**

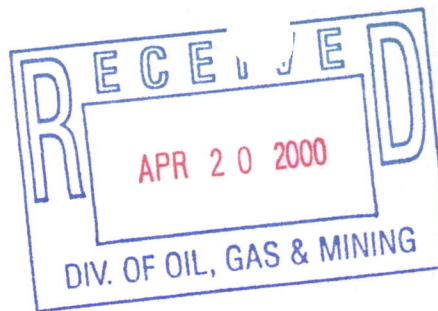
**107.1.15 Constructing berms, fences, etc. above highwalls**

Please describe measures in place to prevent public access above or below the highwall during operations or explain why these measures are unnecessary. Please identify the location of locked gates, fencing, or berms on the surface facilities map. (AAG)

**107.6 Concurrent reclamation**

What is the projected time frame for beginning the concurrent reclamation described under section R647-4-107 of the submission (i.e., how many years from now)? The Division





encourages Duchesne County to perform this concurrent reclamation as soon as possible to minimize or reduce the amount of disturbed area. (AAG)

#### **R647-4-109 - Impact Assessment**

##### **109.4 Slope stability, erosion control, air quality, safety**

The submission states the slopes generated by this operation are stable, as they are rock. Please describe the highwalls by providing the highwall length, vertical height, bench width, and bench spacing used in the current operations and proposed for the mine expansion area. The highwall cross sectional drawings requested under R647-4-105.3 may provide some of this information. (AAG)

#### **R647-4-110 - Reclamation Plan**

##### **110.2 Roads, highwalls, slopes, drainages, pits, etc., reclaimed**

The submission states all roads, pits, slopes and other areas will be graded back to slope and contoured into the existing ground and covered with topsoil, scarified and reseeded. Please describe the highwall and slope configurations (angle, benching, composition, surface roughness) after final reclamation. Please describe the proposed amount of soil cover to be used in reclaiming these areas. The reclamation information provided here should agree with the graphic representations shown on the requested reclamation treatments map. (AAG)

##### **110.3 Description of facilities to be left (post mining use)**

Will the "Existing Uintah County Road Right-of-Way" shown on Exhibit B be reclaimed during final reclamation of this site or will it remain? If it is proposed to remain, please provide the appropriate variance request information as described under section R647-4-112. (AAG)

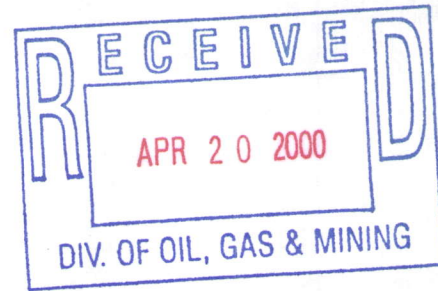
##### **110.5 Revegetation planting program**

The plan states that Division recommendations will be followed with regards to the reclamation seed mixture. Attached to this review is a copy of the recommendations made by the Division on November 29, 1995. This recommendation is still valid for your site. (LK)

The submission describes topsoil salvage from 3.5 acres. The reclamation section of the submission states the disturbed areas will be covered with soil at a minimum six inch depth. Will the entire disturbed area be covered with six inches of soil as part of reclamation? Will overburden materials be used as topsoil substitute material in final reclamation? If so, please provide an agronomic soil analysis of these materials. Will organic materials or fertilizers be added to this overburden material as part of final reclamation? If not, please explain why. (AAG)



Page 4  
Initial Review  
M/047/028  
April 27, 1998



**R647-4-111 - Reclamation Practices**

**111.1 Public safety & welfare**

**1.15 Constructing berms/fences above highwalls**

Please describe any berms or fences proposed to protect the public from highwall hazards as part of final reclamation or explain why these measures are unnecessary. (AAG)

**111.6 All slopes regraded to stable configuration**

Please see comments under R647-4-109.4 regarding slope configurations. (AAG)

**111.7 Highwalls stabilized at 45 degrees or less**

Please see comments under R647-4-109.4 regarding highwall configurations. (AAG)

**111.12 Topsoil redistribution**

Section 106.6 of the submission indicated 6 inches of topsoil would be recovered from a 3.5 acre area to provide an estimated 3,000 CY of soil for use in reclamation. This is not a sufficient amount of topsoil for coverage of the entire disturbed area of 20.9 acres. Please describe the proposed use of the limited amount of topsoil (AAG)

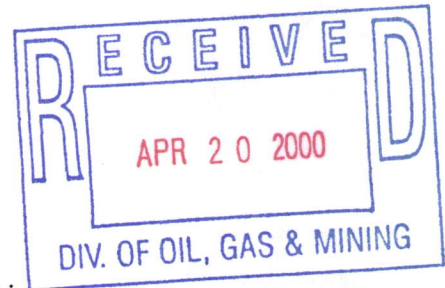
**R647-4-112 - Variance**

The submission did not contain any variance requests. The information requested in this review will be needed to determine if variances are warranted. (AAG)

**R647-4-113 - Surety**

The submission did not contain an estimate of the reclamation costs. The Division has prepared a draft reclamation cost estimate (copy attached) based on the information provided in this submission. This draft estimate will need to be revised after receiving the information requested in this review letter. The final reclamation cost estimate may be higher or lower than this draft estimate of \$37,400. (AAG)

Attachments:      Seedmix  
                         DRAFT Division Reclamation Estimate of 4/10/98



Recommended Revegetation Species List  
for

Duchesne County  
Duchesne County Tar Sands  
M/047/028

Prepared by DOGM November 29, 1995

<u>Common Name</u>	<u>Species Name</u>	<u>*Rate lbs/ac (PLS)</u>
'Hycrest' crested wheatgrass	<u>Agropyron cristatum 'Hycrest'</u>	0.5
Intermediate wheatgrass	<u>Agropyron intermedium</u>	1.0
Orchard Grass	<u>Dactylis glomerata</u>	0.5
Basin Wildrye	<u>Elymus cinereus</u>	1.5
Indian ricegrass	<u>Oryzopsis hymenoides</u>	1.5
Ladac Alfalfa	<u>Medicago sativa</u>	1.0
Yellow sweetclover	<u>Melilotus officinalis</u>	0.5
Palmer penstemon	<u>Penstemon palmeri</u>	0.5
Small burnet	<u>Sanguisorba minor</u>	1.5
Wyoming big sagebrush	<u>Artemisia tridentata wyomingensis</u>	0.1
4-Wing Saltbush	<u>Atriplex canescens</u>	1.0
Rubber rabbitbrush	<u>Chrysothamnus nauseosus</u>	0.25
Forage kochia	<u>Kochia prostrata</u>	0.5
Bitterbrush	<u>Purshia tridentata</u>	1.0
Total		11.35 lbs/ac

\*This the recommended drill seeding rate.

If the species are to be broadcast seeded, increase the rate by 50%.

R647-4110 Reclamation Plan  
110.5



# RECLAMATION SURETY ESTIMATE DRAFT

Duchesne County

Duchesne County Asphalt

M/047/028

Prepared by Utah State Division of Oil, Gas & Mining

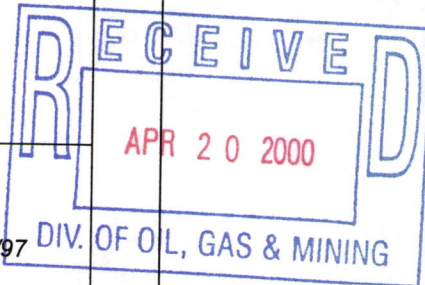
last revision

04/16/98

filename m47-28.wb2

page "ESTIMATE"

Duchesne County



THIS IS A DRAFT ESTIMATE ONLY

-This site was previously known as Cedar Buttes Asphalt Mine S/047/028

-Duchesne County posted an interim surety of \$32,750 on 3/31/98; 13.1 acres X \$2,500/acre

-This draft estimate is based on information contained in the LMO-NOI submission received 10/8/97

-No structures or facilities will remain on site after final reclamation

-All acreages, volumes & lengths used in this draft estimate have been assumed & will require verification

-All reclamation tasks shown in this estimate have been assumed & will require verification.

last unit cost update 04/18/97

-Amount of disturbed area which will receive reclamation treatments = 27.0 acres

-Estimated total disturbed area for this mine = 27.0 acres

Activity	Quantity	Units	\$/unit	\$	Note
Safety gates, signs, etc. (mtls & installation)	1	sum	200	200	(1)
Demolition of buildings & facilities	est	100 CF	0.23	23	(2)
Debris & equipment removal - trucking	est	1 trips	48	48	(3)
Debris & equipment removal - dump fees		0 CY	6	0	(4)
Debris & equipment removal - loading trucks w/FE loader		0 hours	166	0	(5)
Demolition & debris removal - general labor	est	8 hours	15	120	(6)
Regrading facilities areas		0.5 acre	415	208	(7)
Regrading waste dump slopes	est	1 CY	0.32	0	(8)
Ripping waste dump tops	est	1.1 acre	363	399	(9)
Ripping stockpile & compacted areas	est	2.5 acre	363	908	(9)
Ripping pit floors	est	9.0 acre	363	3,267	(9)
Ripping pit access roads	est	1.0 acre	363	363	(9)
Creating safety berms or barriers around high	est	1,500 LF	0.10	150	(10)
Ripping access roads - dozer	est	0.7 acre	363	254	(9)
Regrading access roads - dozer	est	0.7 acre	415	291	(7)
Sidecast mtl replacement on steep roads- trac	est	900 LF	0.85	765	(11)
Surface drainage restoration or construction	est	100 LF	0.10	10	(10)
Topsoil replacement - dozer	est	5000 CY	0.40	2,000	(12)
Topsoil replacement - scraper	est	5000 CY	1.01	5,050	(13)
Topsoil replacement - truck & FE loader		0 CY	1.99	0	(14)
Mulching (2 ton/acre alfalfa)	est	27.0 acre	160	4,320	(00)
Fertilizing ( 100 lb/acre diammonium phosphate)		0.0 acre	90	0	(00)
Broadcast seeding (~20 lb/acre)	est	10.0 acre	170	1,700	(00)
Drill seeding (~13 lb/acre)	est	17.0 acre	150	2,550	(00)
Hydroseeding		0.0 acre	800	0	(00)
General site cleanup & trash removal	est	27.0 acre	50	1,350	(00)
Equipment mobilization	est	4 equip	1000	4,000	(00)
Reclamation Supervision	est	7 days	356	2,492	(15)
10% Contingency		Subtotal		30,467	
				3,047	
Escalate for 5 years at 2.24% per yr		Subtotal		\$33,514	
				3,926	
		Total		\$37,440	
				\$37,400	
Average cost per disturbed acre =				\$1,385	

Rounded surety amount in yr 2003-\$

\$37,400